SEQUENCE LISTING

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<110> Schmaljohn, Connie S.
      Fuller, James T.
<120> Nucleic Acid Immunization
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<140> US 10/411,205
<141> 2003-04-11
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ttattaattt caatataata taaatttaat tttatacaaa aaggagaacg tat atg
                                                            Met
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Lys Lys Arg Lys Val Leu Ile Pro Leu Met Ala Leu Ser Thr Ile Leu
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gag Glu	aac Asn 35	cgg Arg	tta Leu	tta Leu	aat Asn	gaa Glu 40	tca Ser	gaa Glu	tca Ser	agt Ser	tcc Ser 45	cag Gln	Gly	tta Leu	cta Leu	320
gga Gly 50	tac Tyr	tat Tyr	ttt Phe	agt Ser	gat Asp 55	ttg Leu	aat Asn	ttt Phe	caa Gln	gca Ala 60	ccc Pro	atg Met	gtg Val	gtt Val	acc Thr 65	368
tct Ser	tct Ser	act Thr	aca Thr	ggg Gly 70	gat Asp	tta Leu	tct Ser	att Ile	cct Pro 75	agt Ser	tct Ser	gag Glu	tta Leu	gaa Glu 80	aat Asn	416
att Ile	cca Pro	tcg Ser	gaa Glu 85	aac Asn	caa Gln	tat Tyr	ttt Phe	caa Gln 90	tct Ser	gct Ala	att Ile	tgg Trp	tca Ser 95	gga Gly	ttt Phe	464
atc Ile	aaa Lys	gtt Val 100	aag Lys	aag Lys	agt Ser	gat Asp	gaa Glu 105	tat Tyr	aca Thr	ttt Phe	gct Ala	act Thr 110	tcc Ser	gct Ala	gat Asp	512
aat Asn	cat His 115	gta Val	aca Thr	atg Met	tgg Trp	gta Val 120	gat Asp	gac Asp	caa Gln	gaa Glu	gtg Val 125	att Ile	aat Asn	aaa Lys	gct Ala	560
tct Ser 130	aat Asn	tct Ser	aac Asn	aaa Lys	atc Ile 135	aga Arg	tta Leu	gaa Glu	aaa Lys	gga Gly 140	aga Arg	tta Leu	tat Tyr	caa Gln	ata Ile 145	608
aaa Lys	att Ile	caa Gln	tat Tyr	caa Gln 150	cga Arg	gaa Glu	aat Asn	cct Pro	act Thr 155	gaa Glu	aaa Lys	gga Gly	ttg Leu	gat Asp 160	ttc Phe	656
aag Lys	ttg Leu	tac Tyr	tgg Trp 165	acc Thr	gat Asp	tct Ser	caa Gln	aat Asn 170	aaa Lys	aaa Lys	gaa Glu	gtg Val	att Ile 175	tct Ser	agt Ser	704
gat Asp	aac Asn	tta Leu 180	caa Gln	ttg Leu	cca Pro	gaa Glu	tta Leu 185	aaa Lys	caa Gln	aaa Lys	tct Ser	tcg Ser 190	aac Asn	tca Ser	aga Arg	752
aaa Lys	aag Lys 195	cga Arg	agt Ser	aca Thr	agt Ser	gct Ala 200	gga Gly	cct Pro	acg Thr	gtt Val	cca Pro 205	gac Asp	cgt Arg	gac Asp	aat Asn	800
gat Asp 210	gga Gly	atc Ile	cct Pro	gat Asp	tca Ser 215	tta Leu	gag Glu	gta Val	gaa Glu	gga Gly 220	tat Tyr	acg Thr	gtt Val	gat Asp	gtc Val 225	848
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aag Lys	aaa Lys	gga Gly	tta Leu	acc Thr	aaa Lys	tat Tyr	aaa Lys	tca Ser	tct Ser	cct Pro	gaa Glu	aaa Lys	tgg Trp	agc Ser	acg Thr	944

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			ccc ctt gtg gca Pro Leu Val Ala 285		1040
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			acg aga aca ata Thr Arg Thr Ile 315		1136
			gaa gta cat gga Glu Val His Gly		1184
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			tcg tta gtg tta Ser Leu Val Leu		1424
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gat caa gta	tat ggg aat	ata gca aca	tac aat ttt gaa	aat gga aga	1664

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	agg Arg															1712
	gaa Glu 515														ctg Leu	1760
	gaa Glu															1808
	aaa Lys															1856
	aac Asn															1904
	ttt Phe															1952
	tta Leu 595															2000
	aaa Lys															2048
	tat Tyr															2096
aag Lys	gag Glu	Ala	His	Arg	Glu	Val	att Ile	Asn	Ser	Ser	Thr	Glu	Gly	Leu	ttg Leu	2144
tta Leu	aat Asn	att Ile 660	gat Asp	aag Lys	gat Asp	ata Ile	aga Arg 665	aaa Lys	ata Ile	tta Leu	tca Ser	ggt Gly 670	tat Tyr	att Ile	gta Val	2192
	att Ile 675															2240
	atg Met															2288
gat Asp	ttt Phe	aaa Lys	aaa Lys	tat Tyr 710	aat Asn	gat Asp	aaa Lys	tta Leu	ccg Pro 715	tta Leu	tat Tyr	ata Ile	agt Ser	aat Asn 720	ccc Pro	2336

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Asn Pro Ser Glu Asn Gly Asp Thr Ser Thr Asn Gly Ile Lys Lys Ile
tta atc ttt tct aaa aaa ggc tat gag ata gga taaggtaatt ctaggtgatt 2485
Leu Ile Phe Ser Lys Lys Gly Tyr Glu Ile Gly
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Leu Gly Tyr Tyr Phe Ser Asp Leu Asn Phe Gln Ala Pro Met Val Val
Thr Ser Ser Thr Thr Gly Asp Leu Ser Ile Pro Ser Ser Glu Leu Glu
Asn Ile Pro Ser Glu Asn Gln Tyr Phe Gln Ser Ala Ile Trp Ser Gly
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Phe Ile Lys Val Lys Lys Ser Asp Glu Tyr Thr Phe Ala Thr Ser Ala
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                                        155
Phe Lys Leu Tyr Trp Thr Asp Ser Gln Asn Lys Lys Glu Val Ile Ser
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Ser Asp Asn Leu Gln Leu Pro Glu Leu Lys Gln Lys Ser Ser Asn Ser
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Arg Lys Lys Arg Ser Thr Ser Ala Gly Pro Thr Val Pro Asp Arg Asp
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Asn Asp Gly Ile Pro Asp Ser Leu Glu Val Glu Gly Tyr Thr Val Asp
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                                            220
Val Lys Asn Lys Arg Thr Phe Leu Ser Pro Trp Ile Ser Asn Ile His
                    230
                                        235
Glu Lys Lys Gly Leu Thr Lys Tyr Lys Ser Ser Pro Glu Lys Trp Ser
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Thr Ala Ser Asp Pro Tyr Ser Asp Phe Glu Lys Val Thr Gly Arg Ile
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Asp Lys Asn Val Ser Pro Glu Ala Arg His Pro Leu Val Ala Ala Tyr
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Pro Ile Val His Val Asp Met Glu Asn Ile Ile Leu Ser Lys Asn Glu

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Leu Ala Gly Glu Arg Thr Trp Ala Glu Thr Met Gly Leu Asn Thr Ala
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Asp Thr Ala Arg Leu Asn Ala Asn Ile Arg Tyr Val Asn Thr Gly Thr
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Ala Pro Ile Tyr Asn Val Leu Pro Thr Thr Ser Leu Val Leu Gly Lys
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                                        460
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Leu Val Glu Arg Arg Ile Ala Ala Val Asn Pro Ser Asp Pro Leu Glu
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                                         540
Thr Thr Lys Pro Asp Met Thr Leu Lys Glu Ala Leu Lys Ile Ala Phe
                 550
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Gly Phe Asn Glu Pro Asn Gly Asn Leu Gln Tyr Gln Gly Lys Asp Ile
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Thr Glu Phe Asp Phe Asn Phe Asp Gln Gln Thr Ser Gln Asn Ile Lys
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Lys Ile Lys Leu Asn Ala Lys Met Asn Ile Leu Ile Arg Asp Lys Arg
  610 615
Phe His Tyr Asp Arg Asn Asn Ile Ala Val Gly Ala Asp Glu Ser Val
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                                     635
Val Lys Glu Ala His Arg Glu Val Ile Asn Ser Ser Thr Glu Gly Leu
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Leu Leu Asn Ile Asp Lys Asp Ile Arg Lys Ile Leu Ser Gly Tyr Ile
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Val Glu Ile Glu Asp Thr Glu Gly Leu Lys Glu Val Ile Asn Asp Arq
                          680
Tyr Asp Met Leu Asn Ile Ser Ser Leu Arg Gln Asp Gly Lys Thr Phe
                      695
Ile Asp Phe Lys Lys Tyr Asn Asp Lys Leu Pro Leu Tyr Ile Ser Asn
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Pro Asn Tyr Lys Val Asn Val Tyr Ala Val Thr Lys Glu Asn Thr Ile
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Ile Asn Pro Ser Glu Asn Gly Asp Thr Ser Thr Asn Gly Ile Lys Lys
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